

In order to investigate the moderating effects of gender, data analysis ~~is~~ were was classified into two gender subgroups ~~according to gender~~ to explore whether substance use acted as a gender-specific mediators between SES and metabolic syndrome ~~in a gender-specific manner~~. All tests were two-tailed, and $P < 0.05$ was considered statistically significant.

註解 [Editor1]:
Golden English Editing
Clinical Medicine
Public Health
Sample of Work

Results

Characteristics of study subjects

~~Table 1 can be seen~~ The personal characteristics of the study subjects can be seen in Table 1. A total of 6,188 subjects, with 3,107 males (50.2%) and 3,081 females (49.8%), ~~was~~ were included in the analysis. The M mean age was 42.3 years for males (SD = 15.3) and 42.6 years for females (SD = 15.3); ~~and~~. The mean SES score ~~of SES~~ was 2.2 for males (SD = 1.3) and 2.2 for females (SD = 1.2). The prevalence of metabolic syndrome was higher in males (19.9%) than ~~compared with that~~ in females (15.2%). Among male subjects, 44.2% ~~of males~~ consumed alcohol, 46.4% smoked cigarettes, and 14.4% chewed betel-nut. In contrast, among female subjects, 10.6% consumed alcohol, 3.7% smoked cigarettes, and 1.8% chewed betel-nut. Males reported significantly more alcohol consumption, cigarette smoking, and betel-nut chewing than ~~for~~ females ($P < 0.001$).

Mediating effects of substance use on SES and metabolic syndrome

To investigate the mediating role of substance use on the relationship between SES and metabolic syndrome, the three necessary conditions that ~~determine~~ must be met to demonstrate a mediating effect in males and females were examined. The results ~~were described~~ are as follows:

Mediating effects of substance use in males

The first condition ($Y = cX$) was not ~~supported~~ met in males. After adjustment for control variables with logistic regression, SES was not associated with the prevalence of metabolic syndrome in males (see Table 2).

The data partially supported the second condition ($M = aX$) being met in males (~~$M = aX$~~). After adjustment for control variables with logistic regression, males with a

higher SES engaged in ~~smoked~~ less cigarette smoking and less ~~chewed~~ betel-nut chewing ~~nut less~~ (ORs = 0.81, 0.71; $P < 0.001$; 95% CI = 0.76-0.86, 0.64-0.77). Here, an increase of ~~in~~ each SES level ~~SES~~ was associated with a 19% ~~and~~ 29% reduction in ~~the~~ odds of ~~having~~ smoking ~~and chewing~~ betel-nut ~~chewing~~ ~~nut~~, respectively. ~~But~~ However, SES was not significantly associated with alcohol consumption (see Table 2).

The third condition ($Y = c'X + bM$) was partially ~~supported~~ ~~met~~ in males ($Y = c'X + bM$). After adjustment for control variables and SES with logistic regression, males who smoked cigarettes and chewed betel-nuts had a higher ~~risk~~ odds of ~~suffering from~~ metabolic syndrome (ORs = 1.49, 1.59; $P < 0.01$; 95% CI = 1.18-1.88, 1.18-2.14) (Table 2). Males with cigarettes smoking or betel-nut chewing ~~risk factors~~ had metabolic syndrome ~~odds~~ that were 1.49- and 1.59-fold ~~greater~~ than those of non-smokers and non-chewers, respectively. However, no significant association between alcohol consumption and metabolic syndrome was found. To summarize the findings, the relationships among ~~the~~ SES, substance use, and metabolic syndrome are represented in Figure 2.

Males' SES had no direct effect on metabolic syndrome. ~~The~~ ~~the~~ first condition was not ~~supported~~ ~~met~~ in males. ~~However, MacKinnon (2000), and Shrout and Bolger (2002) recommended it was not a necessary~~ ~~have suggested that this~~ condition ~~need not be~~ ~~met for mediation effects to be present~~. Furthermore, ~~the~~ Sobel test showed ~~that~~ cigarette smoking and betel-nut chewing had ~~a~~ significant mediating effect on the association between SES and metabolic syndrome (Sobel $Z = -3.06, -2.80$; $P < 0.05$) (data not shown). The results stated above supported the ~~existence of~~ mediating effects of cigarette smoking and betel-nut chewing.

註解 [MS2]:

CHECK: Please check that this edit retains your intended meaning. In particular, please clarify what the first condition is not necessary for. Is it not necessary for mediation effects to be present, as edited? Or, do you mean “need not be met for SES & metabolic syndrome to be linked”? Please check and revise if necessary.